

AMENDMENTS TO THE CLAIMS

Claims 1 through 15 previously cancelled.

16. (Original) A method of fabricating a semiconductor device having a semiconductor region, the method comprising the steps of:

5 forming at least one conductive post overlying the semiconductor region to form a structure;

 encapsulating the structure and the at least one conductive post to form a planarized cured passivation layer; and

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 exposing the at least one conductive post through the planarized cured passivation layer to form the semiconductor device.

17. (Original) The method of claim **16**, wherein the step of forming at least one conductive post comprises a lift-off step, and the at least one conductive post
15 comprises at least one of Pt, Au and Ti.

18. (Original) The method of claim **16**, wherein the step of encapsulating the structure and the at least one conductive post comprises the steps of:

 forming the passivation layer by spinning on benzocyclobutene ("BCB");
20 and

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heating the passivation layer in an N_2 atmosphere to a temperature substantially in the range of 250-350°C for a period substantially in the range of 1-30 minutes, such that the passivation layer is spun on, cured and planarized.

5 **19. (Original)** The method of claim **16**, wherein the step of exposing the at least one conductive post comprises the step of etching the planarized cured passivation layer.

10 **20. (Original)** The method of claim **19**, wherein the step of etching the planarized cured passivation layer comprises a Reactive Ion Etching step and employs a chemistry of at least one of $CF_4:O_2$ at an approximate ratio of 40:60 and $SF_6:O_2$ at an approximate ratio of 6:10.

15 **21. (New)** A method of fabricating a semiconductor device having a semiconductor region, the method comprising the steps of:

forming at least two conductive posts overlying the semiconductor region to form a structure;

encapsulating the structure and at least one of the at least two conductive posts to form a planarized cured passivation layer; and

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exposing the at least one of the at least two conductive posts through the planarized cured passivation layer to form the semiconductor device.

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6) **22. (New)** The method of Claim **21**, wherein the step of forming at least two conductive posts comprises a lift-off step, and the at least one conductive post comprises at least one of Pt, Au and Ti.

5) **23. (New)** The method of Claim **21**, wherein the step of encapsulating the structure and at least one of the at least two conductive posts comprises the steps of:

forming the passivation layer by spinning on benzocyclobutene ("BCB");
and

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heating the passivation layer in an N₂ atmosphere to a temperature substantially in the range of 250-350°C for a period substantially in the range of 1-30 minutes, such that the passivation layer is spun on, cured and planarized.

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✓ **24. (New)** The method of Claim **21**, wherein the step of exposing the at least one of the at least two conductive posts comprises the step of etching the planarized cured passivation layer.

20) **25. (New)** The method of Claim **24**, wherein the step of etching the planarized cured passivation layer comprises a Reactive Ion Etching step and employs a chemistry of at least one of CF₄:O₂ at an approximate ratio of 40:60 and SF₆:O₂ at an approximate ratio of 6:10.

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✓ 26. (New) A method of fabricating a semiconductor device having a semiconductor region, the method comprising the steps of:

5 forming at least two conductive posts of about the same height overlying the semiconductor region to form a structure;

encapsulating the structure and at least one of the at least two conductive posts to form a planarized cured passivation layer; and

10 exposing the at least one of the at least two conductive posts through the planarized cured passivation layer to form the semiconductor device.

27. (New) The method of Claim 26, wherein the step of forming at least two conductive posts comprises a lift-off step, and the at least one conductive post comprises at least one of Pt, Au and Ti.

0 28. (New) The method of Claim 26, wherein the step of encapsulating the structure and at least one of the at least two conductive posts comprises the steps of:

20 forming the passivation layer by spinning on benzocyclobutene ("BCB"); and

25 heating the passivation layer in an N₂ atmosphere to a temperature substantially in the range of 250-350°C for a period substantially in the range of 1-30 minutes, such that the passivation layer is spun on, cured and planarized.

✓ 29. (New) The method of Claim 26, wherein the step of exposing the at least one of the at least two conductive posts comprises the step of etching the planarized cured passivation layer.

✓ 30. (New) The method of Claim 29, wherein the step of etching the planarized cured passivation layer comprises a Reactive Ion Etching step and employs a chemistry of at least one of $\text{CF}_4:\text{O}_2$ at an approximate ratio of 40:60 and $\text{SF}_6:\text{O}_2$ at an approximate ratio of 6:10.